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***1-OCTADECANOL***  
***CAS N°: 112-92-5***

## Substance

<i>End Point</i>	:	<b>IDENTIFIERS, PHYSICAL AND CHEMICAL PROPERTIES</b>
<i>Chemical Name</i>	:	<b>1-Octadecanol</b>
<i>Common Name</i>	:	<b>Stearyl alcohol</b>
<i>CAS Number</i>	:	<b>112-92-5</b>
<i>RTECS Number</i>	:	<b>RG2010000</b>

## Synonyms

<b>Aldol 62</b>	<b>Alfol 18</b>
<b>Atalco S</b>	<b>Cachalot S 43</b>
<b>CO 1895F</b>	<b>Conol 1675</b>
<b>Conol 30F</b>	<b>Crodacol S</b>
<b>1-Hydroxyoctadecane</b>	<b>Kalcohol 80</b>
<b>Lanol S</b>	<b>Lorol 28</b>
<b>Octadecanol</b>	<b>n-Octadecanol</b>
<b>Octadecyl alcohol</b>	<b>Sipol S</b>
<b>Siponol S</b>	<b>Siponol SC</b>
<b>Stearol</b>	<b>Steraffine</b>

## Properties &amp; Definitions

<i>Molecular Formula</i>	:	<b>C18H38O</b>
<i>Molecular Weight</i>	:	<b>270.50</b>
<i>Melting Point</i>	:	<b>59.8C</b>
<i>Boiling Point</i>	:	<b>336C</b>
<i>Flash Point</i>	:	<b>170C</b>
<i>Density</i>	:	<b>0.8124 at 59C</b>
<i>Vapour Pressure</i>	:	<b>0.133kPa (1mmHg) at 150.3C</b>
<i>Octanol/Water Partition Coefficient</i>	:	<b>log Pow = 8.22 (calculated)</b>
<i>Water Solubility</i>	:	<b>1.1E-3mg/l at 34C</b>
<i>Solubility in other Solvents</i>	:	<b>Soluble in alcohol, acetone, ether, benzene, chloroform</b>
<i>Impurities</i>	:	<b>Up to 10% of impurities. Variable amounts of n-hexadecanol, n-tetradecanol, n-eicosanol and n-dodecanol. Maximum 2% stearyl stearate, 1% octadecane, 0.5% stearic acid and total hydrocarbons at about 1.8%.</b>
<i>General Comments</i>	:	<b>MP of commercial product = 56-60C and calculated VP= 1.93E-6mmHg are also reported. Presents a moderate fire hazard when exposed to heat or flame. Autoignition temperature = 450C. Adsorption coef. (Log Koc = 5.81 calculated).</b>

## Overall Evaluation

## SIDS INITIAL ASSESSMENT

There is need for further work.

## SHORT SUMMARY OF THE REASONS WHICH SUPPORT THE RECOMMENDATION

The substance is firmly bound to sediments, and therefore anaerobic biodegradation can be an important factor. A 21-day test in daphnids indicated that the substance may be toxic at a range of between 1 and 3mg/l.

## FURTHER WORK RECOMMENDED:

Determination of anaerobic biodegradability. Depending on the results of this test, it may be considered whether or not long-term fish toxicity testing is required.

## Production-Trade

*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Geographic Area* : **USA**  
*General Comments* : In the United States production of detergent range alcohols including octadecanol was 354000 tonnes in 1987.

## References

**!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 7, (1993)

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## Production-Trade

*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Geographic Area* : **DNK**  
*General Comments* : According to Danish trade statistics, national use and manufacture of lauryl, stearyl and cetyl alcohols was in the range of 1000 to 10000 tonnes in 1986.

## References

**!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 6, (1993)

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## Uses

*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Geographic Area* : **USA**

## Use

<u>Quantity</u>	<u>Year</u>	<u>Comments</u>
	<b>1981</b>	Reported as being used in 425 cosmetic formulations at the above range of 0.5 to 50%.

## References

*Primary References* : **JACTDZ**  
ANON. Journal of the American College of Toxicology, Part A, 4(5), 1-29, (1985)

*Secondary References* : **!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 7, (1993)

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## Uses

*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Geographic Area* : **DNK**

## Use

<u>Quantity</u>	<u>Year</u>	<u>Comments</u>
	<b>1992</b>	Registered in 47 non-cosmetic products on the Danish market.

## References

*Secondary References* : **!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 6, (1993)

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## Uses

*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Geographic Area* : **USA**

<b>1981</b>	Unspecified amount used in pharmaceutical dispensing, cosmetic creams, emulsions, textile oils and finishes, antifoam agent and as a chemical raw material.
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## References

*Primary References* : **12VXA5**  
Merck Index: An Encyclopedia of Chemicals, Drugs and Biologicals, 10, 1259, (1983)

*Secondary References* : **!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 7, (1993)

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## Study

*End Point* : **Pathway into the Environment and Environmental Fate.**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**

## Pathway and Transport

*Pathway* : **NATUR**  
*Pathway description* : Presumably of natural origin, has been isolated from plants and insects, from human sebaceous lipids, and has been found in mammalian glands and organs.

## References

*Primary Reference* : **JACTDZ**  
 ANON. Journal of the American College of Toxicology, Part A, 4(5), 1-29, (1985)

*Secondary Reference* : **ISIDSP\***  
 Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 10, (1993)

## Study

*End Point* : **Pathway into the Environment and Environmental Fate.**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**

## Test Method and Conditions

*Test method description* : Mackay level 1 Environmental Partitioning Model  
*Temperature* : **25 C**

## Quantity Transported

<u>Medium</u>	<u>to Medium</u>	<u>Quantity</u>	<u>Time</u>	<u>Year</u>	<u>to Year</u>
<b>AIR</b>		<b>0.45 %</b>			
Into air according to Mackay level 1 model (ML1EP)					
<b>SOIL</b>		<b>51.43 %</b>			
Into soil (according to ML1EP)					
<b>AQ</b>		<b>0.00 %</b>			
Into water (according to ML1EP)					
<b>AQ</b>		<b>0.08 %</b>			
Into suspended solids (according to ML1EP)					
<b>AQ</b>		<b>0.03 %</b>			
Aquatic biota (according to ML1EP)					
<b>SED</b>		<b>48.00 %</b>			
Sediment (according to ML1EP)					
<i>General Comments</i> : Above values are all calculated. Environmental partitioning will be almost exclusively onto soils and sediments.					

## References

*Secondary Reference* : **!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High  
Production Volume Chemicals Programme, (1993)

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## Study

*End Point* : **CONCENTRATION**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Geographic Area* : **ESP**

## Test Subject

Organism Medium Specification Lifestage Sex

**AQ** **FRESH**

*Species/strain/system* : River water entering water works near Barcelona, Spain.

## Test Method and Conditions

*Test method description* : FAB mass spectrometry

## Test Results

Matrix Concentrations Spec. Date

1-Octadecanol has been identified but the concentration was not determined.

## References

*Primary Reference* : **WRERAQ**  
Ventura, F. et al. Water Resources Research, 23(9), 1191, (1989)

*Secondary Reference* : **!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 10, (1993)

## Study

*End Point* : **CONCENTRATION**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**

## Test Results

*General Comments* : Environmental partitioning will be almost exclusively onto soils and sediments. Stearyl alcohol (presumably of natural origin) has been isolated from plants and insects, from human sebaceous lipids and has been found in mammalian glands and organs. (ref. Journal of the American College of Toxicology. vol.4, no.5, 1985. pp.1-29)



## References

*Secondary Reference* : **!SIDSP\***  
 OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 10, (1993)

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## Study

*End Point* : **CONCENTRATION**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Geographic Area* : **USA**

## Test Subject

*Organism* *Medium* *Specification* *Lifestage* *Sex*

**AQ** **INDST**

*Species/strain/system* : Industrial effluent discharged into the Illinois river.

## Test Results

*Matrix* *Concentrations* *Spec.* *Date*

1-Octadecanol has been identified but the concentration was not determined.

## References

*Primary Reference* : **JTEHD6**  
 Somani, S. et al. Journal of Toxicology and Environmental Health, 6, 315-331, (1980)

*Secondary Reference* : **!SIDSP\***  
 Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 10, (1993)

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## Study

*End Point* : **CONCENTRATION**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Geographic Area* : **USA**

## Test Subject

*Organism* *Medium* *Specification* *Lifestage* *Sex*

**AIR**

*Species/strain/system* : Indoor aerosol samples from large building in U.S.A. Particle sizes from 1.1 to 2um.

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## Test Method and Conditions

*Test method description* : GC-MS

## Test Results

<u>Matrix</u>	<u>Concentrations</u>	<u>Spec.</u>	<u>Date</u>
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1-Octadecanol has been identified but the concentration was not determined.

## References

*Primary Reference* : **ESTHAG**  
Weschler, C. Environmental Science and Technology, 14(4), 428-431, (1980)

*Secondary Reference* : **!SIDSP\***  
Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 10, (1993)

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## Study

*End Point* : **HUMAN INTAKE AND EXPOSURE**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**

## Test Subject

Organism Medium Specification Route Lifestage Sex

**HUMAN**

## Test Results

Intake Spec. Date

**1-5 mg/d**

Expected daily exposure through use of consumer products (cosmetics)

**0.015-0.075 mg/kg**

**BW**

Expected daily exposure for a person weighing 70kg.

**<1 mg/d**

Ingested per day as 1-octadecanol as an ingredient in lipsticks

**3782 mg/y**

An annual dermal potential dose with 5% content in a bar of soap used daily (according to the U.S. EPA dermal model, worst case scenario).

*General Comments* : There are many sources of potential consumer exposure. The most intense probably being through the use of creams and cosmetics. Inhalation is unlikely to be a significant exposure route. (See evaluation of the health aspects of stearyl alcohol as a food ingredient, FDA 223-78-2100, 1980).

## References

*Secondary Reference* : **!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1993)

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## Study

*End Point* : **BIODEGRADATION**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**

## Exposure

*Exposure Period* : **2-16 d**

## Test Results

<u>Quantity</u>	<u>Time</u>	<u>Comments on result</u>
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BOD: T/2 ranges from 2 to 16 days. (Painter 1974)

**100 mg/l**

COD

**67 %**

**28 d**

BOD/COD

*General Comments* :

The manufacture considers this as evidence of "ready" biodegradability. However, this test requires continuous shaking, and, as only 67% of the substance had been degraded at the conclusion of the test, the result may better be thought of as an indication of "inherent" biodegradability. Possibly the very low solubility of the test substance (0.0011g/l at 34C) limits bioavailability and thus ready degradation. The test result can perhaps best be interpreted as being near the borderline between ready and inherent biodegradation.

## References

*Secondary Reference* :

**!SIDSP\***

OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1993)

## Study

*End Point* : **HYDROLYSIS**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**  
*Medium* : **AQ**  
*Specifications* : **FRESH**

## Test Results

<u>Quantity</u>	<u>Time</u>	<u>Comments on result</u>
50 %		Hydrolysis T/2 estimated at 1000 days (practically inert).

## References

*Primary Reference* : **HKBAD\***  
Henkel. Bestimmung der Akuten Daphientoxizität von Octadecanol im Daphnietest nach DIN 38412 (Test of Octadecanol on Acute Toxicity to Daphnia according to DIN 38412), 01(2), (1988)

*Secondary Reference* : **!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 4, (1993)

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## Study

*End Point* : **SORPTION**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**

## Test Results

*General Comments* : The water solubility of this substance is too low to allow a reliable estimate of partitioning. Can be expected to bind strongly to soils, sediments and particles.

## References

*Primary Reference* : **XQSAR\***  
Veith, G. et al. EPA QSR System, Environmental Research Lab (ERL), (1985)

*Secondary Reference* : **!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 9, (1993)

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## Study

*End Point* : **ABSORPTION**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

**BIRD** **ORL** **ADULT**

*Species/strain/system* : White Leghorn chickens

## Exposure

*Exposure Type* : **SHORT**  
*Dose / Concentration* : **10 % DIET**  
*Exposure comments* : Feeding studies with 1-octadecanol at 10% in the diet, to determine digestibility

## Test Results

Quantity Absorbed Time Comments on result

Digestibility was determined as 0%

## References

*Primary Reference* : **JAFCAU**  
 ANON. Journal of Agricultural and Food Chemistry, 35(10), 1610-16, (1971)

*Secondary Reference* : **!SIDSP\***  
 OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 27, (1993)

## Study

*End Point* : **ABSORPTION**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

**RAT** **ORL**  
**PAR**

*Species/strain/system* : Sprague-Dawley rats

## Test Substance

*Labelled Compound* : **1-Octadecanol labelled with C14**

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## Exposure

<i>Exposure Type</i>	:	<b>SHORT</b>
<i>Exposure comments</i>	:	Test substance was labelled with C14 and administered via duodenal or aortic cannula. Blood and lymph were monitored at intervals up to 24h. Distribution of radioactive substance and biochemical analyses were examined.

## Test Results

<u>Quantity Absorbed</u>	<u>Time</u>	<u>Comments on result</u>
		Absorption of the compound appeared to be a function of its lipid solubility. 56.6% (+/- 14%) was in the lymph. Of this more than half was found in the triglycerides, 6-13% in phospholipids, 2-8% in cholesterol esters, 4-10% unchanged as octadecanol.
		90% of the octadecanol was carried in the chylomicron fraction of blood.

## References

<i>Primary Reference</i>	:	<b>JACTDZ</b> ANON. Journal of the American College of Toxicology, Part A, 4(5), 1-29, (1985)
<i>Secondary Reference</i>	:	<b>!SIDSP*</b> OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 27, (1993)

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## Study

*End Point* : **DISTRIBUTION**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

**BIRD** **ORL** **ADULT**  
**PAR**

*Species/strain/system* : White leghorn chickens

## Test Substance

*Labelled Compound* : **1-Octadecanol. C14**

## Exposure

*Exposure Type* : **SHORT**  
*Exposure comments* : C14 labelled test substance was administered through duodenal or aortal cannula, blood and lymph were monitored at intervals up to 24h. Distribution of radioactive substance was measured.

## Test Results

<i>Organ</i>	<i>Quantity</i>	<i>Time</i>	<i>Comments on result</i>
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<b>INT</b>			Analysis of homogenated intestinal wall showed 56.6% (+/-14%) of the substance present in the lymphatic system of the intestine.
<b>BLOOD</b>			Analysis of blood compartments showed 90% of test substance in the chylomicron fraction.

## References

*Primary Reference* : **JACTDZ**  
 ANON. Journal of the American College of Toxicology, Part A, 4(5), 1-29, (1985)

*Secondary Reference* : **!SIDSP\***  
 OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 27, (1993)

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## Study

*End Point* : **BIOCONCENTRATION**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**

## Test Results

<i>Organ</i>	<i>Bioconcent. Factor</i>	<i>Calc Basis</i>	<i>Time</i>	<i>State</i>	<i>Comments on result</i>
	100000				Calculated results based on method of Veith, G. et al. (1980).

*General Comments* : The water solubility of this substance is too low to allow a reliable estimate of partitioning.

## References

*Primary Reference* : **XQSAR\***  
 Veith, G. et al. EPA QSR System, Environmental Research Lab (ERL), (1985)

*Secondary Reference* : **!SIDS\***  
 OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 9, (1993)

## Study

*End Point* : **METABOLISM**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**  
*Geographic Area* : **DNK**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

**RAT** **ORL**  
**PAR**

*Species/strain/system* : Sprague-Dawley rats

## Test Substance

*Labelled Compound* : **C14 labelled 1-octadecanol**

## Exposure

*Exposure Type* : **SHORT**  
*Exposure comments* : C14 labelled 1-octadecanol was administered via duodenal or aortal cannula. Blood and lymph were monitored at intervals up to 24h post administration. Distribution and biochemical analysis were assessed.

## Test Results

<i>Organ</i>	<i>Quantity</i>	<i>Time</i>	<i>Comments on result</i>
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			From the absorbed fraction more than half was metabolized to triglycerides, 6-13% to phospholipids, 2-8% to cholesterol esters, and 4-10% remained as unchanged octadecanol after 24h period, from dosing.

## References

*Primary Reference* : **JACTDZ**  
 ANON. Journal of the American College of Toxicology, Part A, 4(5), 1-29, (1985)

*Secondary Reference* : **!SIDSP\***  
 OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 27, (1993)

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## Study

*End Point* : **MAMMALIAN ACUTE TOXICITY**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**

*Species/strain/system* : Wistar rats  
*Dose / Concentration* : **5.0 g/kg**

## Test Method and Conditions

*Test method description* : OECD No. 401, Limit test.

## Test Results

<u>Organism</u>	<u>Medium</u>	<u>Spec.</u>	<u>Route</u>	<u>Lifestage</u>	<u>Sex</u>	<u>Effect</u>	<u>Effect Comments</u>
<b>RAT</b>			<b>ORL</b>			<b>LD50</b>	Oral LD50 for wistar rats was estimated as >5.0g/kg/body weight.
<i>General Comments</i>		:	No mortality among the experimental animals at the dose up to 5.0g/kg/body weight.				

## References

*Secondary Reference* : **!SIDSP\***  
 OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 17, (1993)

## Study

*End Point* : **MAMMALIAN TOXICITY**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

**RAT** **IHL**

*Species/strain/system* : Strain not indicated

## Test Method and Conditions

*Test method description* : The rats were exposed by inhalation of 10% 1-octadecanol in 55% ethanol for 2-hours. OECD fixed dose test guidelines for variable duration of testing.

## Exposure

*Exposure Period* : **2 h**  
*Dose / Concentration* : **10 %**

## Test Results

LC50 for acute inhalation toxicity was not established under the experimental conditions.

*General Comments* : The exposure was reported to be without effect. No further details were provided.

## References

*Secondary Reference* : **!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 17-18, (1993)

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## Study

*End Point* : **MAMMALIAN TOXICITY**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**  
*Geographic Area* : **DNK**

## Test Subject

<u>Organism</u>	<u>Medium</u>	<u>Specification</u>	<u>Route</u>	<u>Lifestage</u>	<u>Sex</u>	<u>Number exposed</u>	<u>Number controls</u>
RAT			ORL		M	10/DOSE	10
					F	10/DOSE	10

*Species/strain/system* : Sprague-Dawley rats strain

## Test Substance

*Vehicle - Solvent* : Olive oil

## Test Method and Conditions

*Test method description* : OECD Guideline No. 407; a 28-day oral Toxicity Test (Repeated Dose Toxicity Test).

## Exposure

*Exposure Period* : **28 d**  
*Dose / Concentration* : **100-1000 mg/kg BW**  
*Exposure comments* : Ten animals per each sex per dose received: 0 (negative control), 100, 500 or 1000mg/kg/body weight per day in oral gavage, preparation of 1-octadecanol in olive oil for 28 days.

## Test Results

<u>Organ</u>	<u>Effect</u>	<u>Rev.</u>	<u>OnSet</u>	<u>Sex</u>	<u>Affected in Exposed - Controls</u>
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	<b>NEF</b>				

Dose at which no toxic effects were observed was concluded to be >1000mg/kg/body weight per day.

*General Comments* : There was no substance related effects: no effects noted on biochemical anatomical or histopathological parameters. No cumulative effects were observed after 28 days of daily oral administration of 1-octadecanol up to 1000mg/kg/body weight per day.

## References

*Secondary Reference* : **!SIDSP\***  
 OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 20, (1993)

## Study

*End Point* : **MAMMALIAN TOXICITY**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**  
*Geographic Area* : **DNK**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

**RBT** **SKN** **10/DOSE** **10**

*Species/strain/system* : Rabbit, strain unspecified

## Test Substance

*Description of the test substance* : Cream containing 8% of tested substance.

## Test Method and Conditions

*Test method description* : OECD Guidelines for Repeated Dose Toxicity-Dermal

## Exposure

*Dose / Concentration* : **8.8-13.2 mg/cm<sup>2</sup>**  
*Exposure comments* : 2 groups of 10 animals each received topical applications of the cream containing 8% 1-octadecanol 3d/wk for 3 months. One group received a dose of 8.8mg/cm<sup>2</sup> on 8.4% of body surface, the other group received 13.2mg/cm<sup>2</sup> on 11.2% of body surface. 10 animals served as untreated control.

## Test Results

<i>Organ</i>	<i>Effect</i>	<i>Rev.</i>	<i>OnSet</i>	<i>Sex</i>	<i>Affected in Exposed - Controls</i>
-----	-----	-----	-----	-----	-----
<b>SKIN</b>	<b>CIRC STRUC</b>				

The product caused slight to well defined erythema and mild desquamation during the first month of treatment.

**SKIN** **STRUC**

At necropsy symptoms of mild inflammation at the application site were reported.

*General Comments* : Apart from local changes there was no evidence of systemic toxicity attributable to topical exposure of 1-octadecanol. No treatment related effects were found in hematological and blood chemistry determinations, urinalysis, organ weight measurements at necropsy.

## References

*Primary Reference* : **JACTDZ**  
ANON. Journal of the American College of Toxicology, Part A, 4(5), 14, (1985)

*Secondary Reference* : **!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 20-21, (1993)

## Study

*End Point* : **CARCINOGENICITY**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**  
*Geographic Area* : **DNK**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

**MOUSE** **SKN** **F** **30**

*Species/strain/system* : Swiss mouse strain

## Test Substance

*Purity Grade* : **97%**

## Exposure

*Dose / Concentration* : **0.4 mg**

*Exposure comments* : 30 female mice were treated to test dermal carcinogenicity potential of octadecanol. Skin was pretreated with dimethylbenz(a)anthracene and thereafter treated with 20ul of octadecanol in cyclohexane, 3x week for 60 weeks (about 0.4mg of octadecanol/application).

## Test Results

<i>Organ</i>	<i>Effect</i>	<i>Rev.</i>	<i>OnSet</i>	<i>Sex</i>	<i>Affected in Exposed - Controls</i>
-----	-----	-----	-----	-----	-----
<b>SKIN</b>	<b>STRUC</b>			<b>F</b>	

1 local papilloma was observed among 23 surviving animals, (appearing at week 30).

*General Comments* : The authors state that the initiation dose alone is non-carcinogenic, and conclude that octadecanol is probably a weak tumor-promoter. OECD/SIDS comment: "The unconventional design of the test, and small number of animals involved make the results difficult to interpret".

## References

*Primary Reference* : **TXAPA9**  
Sice, J. Toxicology and Applied Pharmacology, 8, 70-74, (1966)

*Secondary Reference* : **!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 24-25, (1993)



## Study

*End Point* : **CARCINOGENICITY**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Geographic Area* : **DNK**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

**MOUSE** **PAR** **56** **42/GROUP**

*Species/strain/system* : Strain unspecified

## Test Method and Conditions

*Test method description* : OECD Guideline for Carcinogenicity Testing

## Exposure

*Exposure comments* : The test substance was pressed into spheroidal pellets 5/32 inch in diameter, weighting 24-27mg. Pellets were inserted into bladders of 56 mice. 330 days after surgery all surviving animals were sacrificed and examined for the evidence of carcinoma. Animals surviving more than 175 days but less than 330 days were also evaluated.

## Test Results

<u>Organ</u>	<u>Effect</u>	<u>Rev.</u>	<u>OnSet</u>	<u>Sex</u>	<u>Affected in Exposed - Controls</u>
	<b>STRUC CAR</b>				

In a total of 39 mice surviving more than 175 days, 7 benign tumors and 2 carcinomas of the bladder (5%) were observed (1 stage II and 1 stage III tumor). There were no tumors, benign or malignant among the 3 control groups of 42 animals each which had not received bladder implants.

*General Comments* : A number of other substances tested in this series also produced bladder carcinomas. These included cholesterol, 8% tumor incidence and paraffin with 3% incidence of carcinoma.

## References

*Primary Reference* : **CNREA8**  
Bryan, G. Cancer Research, 26, 105-109, (1966)

*Secondary Reference* : **!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 25, (1993)

## Study

*End Point* : **CARCINOGENICITY**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**  
*Geographic Area* : **DNK**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

**MOUSE** **IPR** **4/GROUP** **4**

*Species/strain/system* : Swiss albino ddy strain

## Exposure

*Exposure Period* : **5 d**  
*Dose / Concentration* : **2.5-10 mg/kg/ d**  
*Exposure comments* : Groups of four 5-week old mice were implanted intra-peritoneally with Erlich Ascites Tumor cells (1 million cells per mouse). After 24h, the mice were exposed I.P. to doses of 2.5 or 10mg/mouse/day of octadecanol for 5 consecutive days.

## Test Results

Survival time was increased to >25.5 days in the 2.5mg group. The survival time was unchanged in the 10mg group relative to untreated controls (18.0 days and 18.3 days respectively).

*General Comments* : "The small number of animals used makes assessment of the possible antitumor activity of octadecanol difficult".

## References

*Primary Reference* : **CNREA8**  
 Ando, K. et al. Cancer Research, 32, 125-129, (1972)

*Secondary Reference* : **!SIDSP\***  
 OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 25-26, (1993)

## Study

*End Point* : **MUTAGENICITY**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**  
*Geographic Area* : **DNK**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

**BACT****VTR**

*Species/strain/system* : Bacteria, Salmonella typhimurium, strains: TA98, TA100, TA1535, TA1537

## Test Method and Conditions

*Test method description* : Ames test

## Exposure

*Dose / Concentration* : **3umol**  
*Exposure comments* : Ames test. The substance was spot tested at one concentration 3umol/plate = total of 815ug/plate in all strains, both with and without metabolic activation with S-9.

## Test Results

<i>Organ</i>	<i>Effect</i>	<i>Rev.</i>	<i>OnSet</i>	<i>Sex</i>	<i>Affected in Exposed - Controls</i>
-----	-----	-----	-----	-----	-----
	<b>NEF</b>				

No evidence of mutagenicity was seen in this test system.

*General Comments* : There was a precipitation of the substance at concentration <3umol/plate (below the original concentration of the substance) making a valid interpretation of the results rather difficult.

## References

*Primary Reference* : **TXCYAC**  
Florin, I. Toxicology, 18, 219-232, (1980)

*Secondary Reference* : **!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 22, (1993)

## Study

*End Point* : **MUTAGENICITY**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**  
*Geographic Area* : **DNK**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

### BACT

### VTR

*Species/strain/system* : Bacteria, Salmonella typhimurium, strains: TA1538, TA1535, TA1537, TA100, TA98

## Test Substance

*Description of the test substance* : Stearyl alcohol from SIGMA chemical company

## Test Method and Conditions

*Test method description* : Ames test

## Exposure

*Exposure comments* : Ames test for spot testing of 1-octadecanol at concentration of 50mg/plate in all strains both with and without metabolic activation with S-9.

## Test Results

<u>Organ</u>	<u>Effect</u>	<u>Rev.</u>	<u>OnSet</u>	<u>Sex</u>	<u>Affected in Exposed - Controls</u>
-----	-----	-----	-----	-----	-----
	<b>NEF</b>				

There was no mutagenic activity observed under the condition of this test. There was no toxic effect reported either with or without metabolic activation. There was no precipitation observed at the concentration used.

*General Comments* : The conclusion drawn by the authors was that the concentration of the substance tested was so low that the value of the test was not fully predictive.

## References

*Primary Reference* : **JEHSDH**  
Blevins, R. et al. Journal of Environmental Sciences and Health, Part C, Environmental Health Sciences, A17(2), 217-239, (1982)

*Secondary Reference* : **!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 22-23, (1993)

## Study

*End Point* : **MUTAGENICITY**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**  
*Geographic Area* : **DNK**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

**BACT**

**VTR**

*Species/strain/system* : Salmonella typhimurium strains: TA1535, TA1537, TA1538, TA98  
TA100

## Test Method and Conditions

*Test method description* : Ames test.

## Exposure

*Dose / Concentration* : **0.63-20.0 ug/ PLATE**  
*Exposure comments* : Concentrations of 0, 0.63, 1.25, 2.5, 5.0, 10.0 and 20.0 microgram/plate, were used with and without metabolic activation by S9. All experiments were performed twice, and results were averaged.

## Test Results

<i>Organ</i>	<i>Effect</i>	<i>Rev.</i>	<i>OnSet</i>	<i>Sex</i>	<i>Affected in Exposed - Controls</i>
-----	-----	-----	-----	-----	-----
	<b>NEF</b>				

No significant increase in the number of histidine + revertants/plate relative to controls was observed at any concentrations tested, with and without metabolic activation.

## References

*Primary Reference* : **NKEZA4**  
 Hacmiya, N. Japanese Journal of Public Health, 29(5), 236-239, (1982)

*Secondary Reference* : **!SIDSP\***  
 OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 21-22, (1993)

## Study

*End Point* : **MUTAGENICITY**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**  
*Geographic Area* : **DNK**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

**MOUSE** **ORL** **6/DOSE** **6**

*Species/strain/system* : Strain not specified

## Test Substance

*Vehicle - Solvent* : Olive oil

## Test Method and Conditions

*Test method description* : Micronucleus test. Japanese Guidelines of testing.

## Exposure

*Dose / Concentration* : **0.36-1.45 g/kg BW**  
*Exposure comments* : Groups of six mice each received single oral dose of 0.36, 0.73 or 1.45g/kg body weight. An additional group of five mice received four doses (oral) of 0.73g/kg body weight of tested substance.

## Test Results

<u>Organ</u>	<u>Effect</u>	<u>Rev.</u>	<u>OnSet</u>	<u>Sex</u>	<u>Affected in Exposed - Controls</u>
	<b>NEF</b>				

There was no evidence of genotoxic effect according to the authors.

## References

*Primary Reference* : **NKEZA4**  
 Hacmiya, N. Japanese Journal of Public Health, 29(5), 236-239, (1982)

*Secondary Reference* : **!SIDSP\***  
 OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 24, (1993)

## Study

*End Point* : **SENSITIZATION**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Geographic Area* : **DNK**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

**GPIG** **SKN** **25** **5/GROUP**

*Species/strain/system* : Guinea pigs, strain not specified

## Test Substance

*Description of the test substance* : Deodorant containing 24% of 1-octadecanol  
*Vehicle - Solvent* : Petrolatum

## Exposure

*Dose / Concentration* : **12 %**  
*Exposure comments* : Draize repeated topical application method consisting of 9 induction applications, 14-day period without treatment followed by the challenge applications for determination of skin sensitization. Controls for petrolatum and untreated animals.

## Test Results

<i>Organ</i>	<i>Effect</i>	<i>Rev.</i>	<i>OnSet</i>	<i>Sex</i>	<i>Affected in</i>	
-----	-----	-----	-----	-----	Exposed - Controls	
<b>SKIN</b>	<b>ALLER INC</b>				<b>1/25</b>	<b>1/5</b>

One of 25 treated animals exhibited an equivocal score 24 hours post application to intact skin sites.

One of 5 petrolatum control animals showed an equivocal reaction score 24 hours post application to intact skin sites.

*General Comments* : The authors concluded that 1-octadecanol was not a contact sensitizer at concentration of 12% in petroleum from an unidentified deodorant (containing 24% of the tested substance) preparation as a source of 1-octadecanol.

## References

*Primary Reference* : **JACTDZ**  
 ANON. Journal of the American College of Toxicology, Part A, 4(5), 18, (1985)

*Secondary Reference* : **!SIDSP\***  
 OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 19-20, (1993)

## Study

*End Point* : **SENSITIZATION**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Geographic Area* : **DNK**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls  
**HUMAN** **SKN** **172-824**

## Test Substance

*Vehicle - Solvent* : Petrolatum

## Test Method and Conditions

*Test method description* : According to North American Contact Dermatitis Group Study Designs.

## Exposure

*Exposure Period* : **1-4 y**  
*Exposure comments* : Patch test with 30% stearyl alcohol in petrolatum was assessed after 48 and 96 hours. The test was conducted during several one-year periods on large numbers of human subjects.

## Test Results

<i>Organ</i>	<i>Effect</i>	<i>Rev.</i>	<i>OnSet</i>	<i>Sex</i>	<i>Affected in Exposed - Controls</i>
<b>SKIN</b>	<b>ALLER</b>				<b>2/172</b>
In 1975-1976 one-year study out of 172 tested. 2 showed allergic reaction (1.2%)					
<b>SKIN</b>	<b>ALLER</b>				<b>1/446</b>
In 1976-1977 one-year study out of 446 tested. 1 showed allergic reaction (0.22%)					
<b>SKIN</b>	<b>ALLER</b>				<b>6/634</b>
In 1978-1979 one year study out of 824 tested. 6 showed allergic reaction (0.73%). In 1979-1980 one year study out of 634 tested. 6 showed allergic reaction (0.95%)					

*General Comments* : There were several other studies performed testing skin sensitization potential of stearyl alcohol (1-octadecanol). The results were negative for skin sensitization. According to the authors, the positive results above indicate a very mild sensitization potential.

## References

*Primary Reference* : **JACTDZ**  
ANON. Journal of the American College of Toxicology, Part A, 4(5), 1-29, (1985)

*Secondary Reference* : **!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 27-28, (1993)



## Study

*End Point* : **IRRITATION**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**  
*Geographic Area* : **DNK**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

**HUMAN** **SKN** **80**

## Exposure

*Exposure Type* : **ACUTE**  
*Dose / Concentration* : **100 %**  
*Exposure comments* : Single insult occlusive patch test using 100% stearyl alcohol. Assessment after 24 hours.

## Test Results

<i>Organ</i>	<i>Effect</i>	<i>Rev.</i>	<i>OnSet</i>	<i>Sex</i>	<i>Affected in Exposed - Controls</i>
-----	-----	-----	-----	-----	-----
<b>SKIN</b>	<b>IRRIT</b>				<b>1/80</b>

A mild irritation was found in one out of 80 human subjects.

## References

*Primary Reference* : **JACTDZ**  
 ANON. Journal of the American College of Toxicology, Part A, 4(5), 1-29, (1985)

*Secondary Reference* : **!SIDSP\***  
 OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 27, (1993)

## Study

*End Point* : **IRRITATION**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**  
*Geographic Area* : **DNK**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

**RBT** **EYE** **6**

*Species/strain/system* : Rabbit, strain not specified

## Exposure

*Exposure Type* : **ACUTE**  
*Exposure comments* : Undiluted 1-octadecanol from four separate commercial sources was instilled full strength into one eye of each of the experimental animals. The irritation was scored on the scale of 0-110.

## Test Results

<i>Organ</i>	<i>Effect</i>	<i>Rev.</i>	<i>OnSet</i>	<i>Sex</i>	<i>Affected in Exposed - Controls</i>
<b>EYE</b>	<b>IRRIT</b>		<b>1 d</b>		

Minimal irritation was noted on day one for three of the samples tested. Maximum score of 5 (scale 0 - 110) was reported. There was no irritation reported for the remaining sample. Scores decreased to 0 by day 4.

*General Comments* : The results were classified by the authors as minimal eye irritation.

## References

*Primary Reference* : **JACTDZ**  
 ANON. Journal of the American College of Toxicology, Part A, 4(5), 14-15, (1985)

*Secondary Reference* : **!SIDSP\***  
 OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 19, (1993)

## Study

*End Point* : **IRRITATION**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**  
*Geographic Area* : **DNK**

## Test Subject

<i>Organism</i>	<i>Medium</i>	<i>Specification</i>	<i>Route</i>	<i>Lifestage</i>	<i>Sex</i>	<i>Number exposed</i>	<i>Number controls</i>
<b>RBT</b>			<b>SKN</b>	<b>ADULT</b>		<b>9</b>	

*Species/strain/system* : Rabbit, strain not specified

## Exposure

*Exposure Type* : **ACUTE**  
*Exposure comments* : Each sample was applied in full strength under occlusion to the clipped skin for 24 hours.

## Test Results

<i>Organ</i>	<i>Effect</i>	<i>Rev.</i>	<i>OnSet</i>	<i>Sex</i>	<i>Affected in Exposed - Controls</i>
<b>SKIN</b>	<b>IRRIT</b>				

Irritation scores of 0.4, 0.5, 1.42 and 1.5 (scale 0 - 4) were recorded after 24 hours of full strength exposure.

*General Comments* : The results were interpreted by the authors as indicating minimal to mild primary skin irritation.

## References

*Primary Reference* : **JACTDZ**  
ANON. Journal of the American College of Toxicology, Part A, 4(5), 15, (1985)

*Secondary Reference* : **!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High  
Production Volume Chemicals Programme, 18-19, (1993)

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## Study

*End Point* : **REPRODUCTION**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Geographic Area* : **DNK**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

**RAT** **ORL** **M**  
**F**

*Species/strain/system* : Wistar (Mol/WIST) SPF strain

## Test Substance

*Description of the test substance* : 1-Octadecanol (Sigma L 5751)  
*Purity Grade* : **99%**

## Test Method and Conditions

*Test method description* : OECD - Combined Repeated Dose and Reproductive/Developmental Toxicity Screening. GLP: YES.

## Exposure

*Exposure Type* : **SHORT**  
*Dose / Concentration* : **100-2000 mg/kg BW**  
*Exposure comments* : The doses of 0, 100, 500 or 2000mg/kg body weight/day was administered in the diet.

## Test Results

<i>Organ</i>	<i>Effect</i>	<i>Rev.</i>	<i>OnSet</i>	<i>Sex</i>	<i>Affected in Exposed - Controls</i>
-----	-----	-----	-----	-----	-----
	<b>NEF</b>				

No observed effect level for parental animals was determined to be more than the highest dose tested >2000mg/kg body weight/day.

**OFSPR** **NEF**

NOEL for F1 generation was established as >2000mg/kg body weight/day

*General Comments* : 1-Octadecanol administered orally in the diet at dosages up to 2000mg/kg body weight/day did not cause any toxic effect on reproduction or on the haematological and pathological parameters investigated under the test conditions.

## References

*Secondary Reference* : **!SIDSP\***  
 OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 26, (1993)

## Study

*End Point* : **AQUATIC ACUTE TOXICITY**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**

*Species/strain/system* : Mosquito (Aedes aegypti) age: 2-14 days  
*Exposure Period* : **24-72 h**  
*Dose / Concentration* : **8.2-101 ml/m2**

## Test Method and Conditions

*Test method description* : Hexane was used as solvent in both tests. The solvent itself showed no harmful effects on the larvae. See under general comments for details.  
*Temperature* : **25-27 C**

## Test Results

<u>Organism</u>	<u>Medium</u>	<u>Spec.</u>	<u>Route</u>	<u>Lifestage</u>	<u>Sex</u>	<u>Effect</u>	<u>Effect Comments</u>
<b>INSEC</b>	<b>AQ</b>	<b>FRESH</b>		<b>EGG</b> <b>LARVA</b>		<b>LD50</b>	LD50 eggs = 8.2ml/m2; LD90 eggs = 14.5ml/m2; LD50 juvenile,(1-4th instar larvae, pupae) = 23.4-77.1ml/m2; LD90 juvenile,(1-4th instar larvae, pupae) = 28.1-101.0ml/m2
				<b>PUPA</b>			

*General Comments* : Mortality based on difference between larval count, between control and study group. LD50 based on field application of litre/hectar. Eggs were immersed in 150ml of hay infusion in jars of 51cm2 surface area. 150-250 embryonated eggs per jar. Each trial carried out in triplicate at 10 different concentrations. Each series of tests repeated 10 times. Larvae and pupae, 25 of each treated as above with minimum of 5 different concentrations of test substance, each series of tests repeated 10 times. Mortality interpreted as failure of larvae to move.

## References

*Primary Reference* : **TRSTAZ**  
 Transactions of the Royal Society of Tropical Medicine and Hygiene, 77(1), 35-38, (1983)

*Secondary Reference* : **!SIDSP\***  
 OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 14, (1993)

## Study

*End Point* : **AQUATIC ACUTE TOXICITY**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**

*Species/strain/system* : Golden Orf (Leuciscus idus)  
*Exposure Period* : **96 h**

## Test Results

Organism Medium Spec. Route Lifestage Sex Effect Effect Comments

**FISH**      **AQ**            **FRESH**

**LC50** LC0 >10000 and LC50 >10000 mg/l.  
(Purity of test substance questionable)

*General Comments* : No further details were provided. The stated concentration exceeds the estimated water solubility of the substance by a factor of about 50 million. (Water solubility = 2.05E-04 (calculated)). It is possible that the actual substance tested was not pure 1-octadecanol, but a commercial mixture also containing other alcohols.

## References

*Secondary Reference* : **!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High  
Production Volume Chemicals Programme, 14, (1993)

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## Study

*End Point* : **AQUATIC TOXICITY**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

**ALGAE** **AQ** **FRESH**

*Species/strain/system* : Green algae (Scenedesmus subspicatus)

## Test Method and Conditions

*Test method description* : DIN 38412 part 9. (Approximates OECD Guideline 201). GLP: yes.

## Test Results

<i>Organ</i>	<i>Effect</i>	<i>Rev.</i>	<i>OnSet</i>	<i>Sex</i>	<i>Affected in Exposed - Controls</i>
-----	-----	-----	-----	-----	-----

**EC10**

Effect concentration EC10 = 21 mg/l

**EC50**

EC50 = 240 mg/l

## References

*Primary Reference* : **HKAVT\***  
Algenzellvermehrungshemmtest nach (Cell Inhibition Test on Algae), RE920040(9), (1992)

*Secondary Reference* : **!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 13, (1993)

## Study

*End Point* : **AQUATIC TOXICITY**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

**CRUS** **AQ** **FRESH**

*Species/strain/system* : Water flea (Daphnia magna)

## Test Method and Conditions

*Test method description* : DIN 38412 part 2, corresponds approximately with OECD Guideline 202 part 1. No information given regarding the use of solvents or emulsifiers, the test substance apparently having been added directly.

## Exposure

*Exposure Type* : **ACUTE**  
*Exposure Period* : **48 h**  
*Dose / Concentration* : **980-2900 mg/l**  
*Exposure comments* : Doses of 1700mg/l were also tested.

## Test Results

<i>Organ</i>	<i>Effect</i>	<i>Rev.</i>	<i>OnSet</i>	<i>Sex</i>	<i>Affected in Exposed - Controls</i>
-----	-----	-----	-----	-----	-----

### EC0

Effect concentration EC0 = 980mg/l for 48h.

### EC50

EC50 = 1700 mg/l for 48h.

### EC100

EC100 = 2900 mg/l for 48h.

### LOEC

The concentration of test substance producing any effect are about 1000000 times the water solubility (water solubility = 1.1E-3mg/l)

## References

*Primary Reference* : **HKBAD\***  
 Bestimmung der Akuten Daphientoxizität von Octadecanol im Daphnietest nach DIN 38412 (Test of Octadecanol on Acute Toxicity to Daphnia according to DIN 38412), 11 RE920029, (1992)

*Secondary Reference* : **!SIDSP\***  
 OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 12, (1993)

## Study

*End Point* : **AQUATIC TOXICITY**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**

## Test Subject

<i>Organism</i>	<i>Medium</i>	<i>Specification</i>	<i>Route</i>	<i>Lifestage</i>	<i>Sex</i>	<i>Number exposed</i>	<i>Number controls</i>
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**CRUS AQ FRESH**

*Species/strain/system* : Water flea (Daphnia magna)



## Test Substance

*Purity Grade* : **98%**

## Test Method and Conditions

*Test method description* : OECD Guidelines 202, part 2. Static test. GLP: yes. Octadecanol was added directly without using solvents or emulsifier. Observations made with regard to reproduction rate, mortality and time of first appearance of descendants.

## Exposure

*Exposure Type* : **LONG**  
*Exposure Period* : **21 d**

## Test Results

<i>Organ</i>	<i>Effect</i>	<i>Rev.</i>	<i>OnSet</i>	<i>Sex</i>	<i>Affected in Exposed - Controls</i>
-----	-----	-----	-----	-----	-----
	<b>NOEC</b>				

No observed effect concentration NOEC is approx. 100 times the water solubility = (1,1 E-3mg/l). NOEC = 0.98 mg/l

*General Comments* : No details were given about abnormal behaviour of daphnia (surface floating etc.).

## References

*Primary Reference* : **HKBCD\***  
 Bestimmung der Chronischen Daphnientoxizität von Octadecanol im Verlangerten Daphnientest (Prolonged Test on Chronic Toxicity of Octadecanol to Daphnia), 920096, (1992)

*Secondary Reference* : **!SIDSP\***  
 OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 13, (1993)

## Study

*End Point* : **AQUATIC TOXICITY**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**

## Test Subject

<i>Organism</i>	<i>Medium</i>	<i>Specification</i>	<i>Route</i>	<i>Lifestage</i>	<i>Sex</i>	<i>Number exposed</i>	<i>Number controls</i>
<b>FISH</b>	<b>AQ</b>	<b>ESTUA</b>				<b>48</b>	

*Species/strain/system* : Rainbow trout (*Oncorhynchus mykiss*) weight: 30-40g

## Test Method and Conditions

*Test method description* : Static test

## Exposure

*Exposure Type* : **ACUTE**  
*Exposure Period* : **96 h**  
*Dose / Concentration* : **1-1000 mg/l**  
*Exposure comments* : Doses of 10 and 100mg/l were also tested

## Test Results

<i>Organ</i>	<i>Effect</i>	<i>Rev.</i>	<i>OnSet</i>	<i>Sex</i>	<i>Affected in Exposed - Controls</i>
-----	-----	-----	-----	-----	-----
	<b>NEF</b>				

No toxicity was observed. There were two deaths which were not dose-related

## References

*Primary Reference* : **BFPIAB**  
 Gorin, J. et al. Bulletin Francais de Pisciculture, 277, 163-185, (1980)

*Secondary Reference* : **!SIDSP\***  
 OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1993)

## Study

*End Point* : **AQUATIC TOXICITY**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**

## Test Subject

<u>Organism</u>	<u>Medium</u>	<u>Specification</u>	<u>Route</u>	<u>Lifestage</u>	<u>Sex</u>	<u>Number exposed</u>	<u>Number controls</u>
<b>FISH</b>	<b>AQ</b>	<b>ESTUA</b>					

*Species/strain/system* : Rainbow trout (Oncorhynchus mykiss)

## Exposure

*Exposure Period* : **20-40 mo**  
*Dose / Concentration* : **1-1000 mg/l**  
*Exposure comments* : Doses of 10 and 100mg/l were also tested for fertilizing ability of sperm of rainbow trout

## Test Results

<i>Organ</i>	<i>Effect</i>	<i>Rev.</i>	<i>OnSet</i>	<i>Sex</i>	<i>Affected in Exposed - Controls</i>
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### **RESP**

At concentration of 1000mg/l (reported as ppm), a statistically significant drop in oxygeno-dependence level occurred both during the exposure period and after 2h recuperation in pure water.

### **METAB**

### **NEF**

Concentrations of 2-3mg/l (reported as ppm) seemed to have no effect on the rest of the metabolism.

### **EGG**

### **REPRO**

The fertility of eggs was significantly reduced ( $p < 0.01$ ) following 40 minutes exposure to 100mg/l.

### **SPERM**

### **REPRO**

Induced significant drop in fertilizing ability of sperm following exposure for 20 or 40 minutes and concentrations of 1, 10, 100 or 1000mg/l.

## References

- Primary Reference* : **BFPIAB**  
Billard, R. Bulletin Francais de Pisciculture, 271, 3-8, (1978)
- Secondary Reference* : **!SIDSP\***  
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 10, (1993)
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## Study

*End Point* : **TERRESTRIAL TOXICITY**  
*Chemical Name* : **1-Octadecanol**  
*CAS Number* : **112-92-5**  
*Study type* : **LAB**

## Test Subject

Organism Medium Specification Route Lifestage Sex Number exposed Number controls

**BACT**

*Species/strain/system* : Bacteria (Pseudomonas putida)

## Test Substance

*Description of the test substance* : Lorol C18

## Test Method and Conditions

*Test method description* : Oxygen consumption test

## Exposure

*Exposure Type* : **ACUTE**

## Test Results

<i>Organ</i>	<i>Effect</i>	<i>Rev.</i>	<i>OnSet</i>	<i>Sex</i>	<i>Affected in Exposed - Controls</i>
-----	-----	-----	-----	-----	-----
	<b>EC50</b>				
Effect concentration EC0 > 100 mg/l					

## References

*Primary Reference* : **HKDBA\***  
 Datenblatt für Altstoffe (Datasheet for Existing Chemical (1-Octadecanol)), 1, 2, (1988)

*Secondary Reference* : **!SIDSP\***  
 OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1993)

## Substance

Chemical Name :  
 Reported Name : **stearyl alcohol**  
 CAS Number : **112-92-5**

Area Type Subject Spec. Description Level / Summary Information :

CSK	REG	FOOD GOODS	-	PRMT MXL	COMPONENT OF PLASTIC PRODUCTS PERMITTED FOR CONTACT WITH FOOD. MAXIMUM LIMIT FOR THE PLASTIC MATERIALS: 20MG/G.
					<u>Title</u> : DIRECTIVE NO.49 ON HYGIENIC REQUIREMENTS ON PLASTICS AND PLASTIC GOODS COMING IN CONTACT WITH FOODSTUFFS
					<u>Reference</u> : HPMZC*, 42, 1978 <u>Effective Date</u> : 1JUL1978
					HYGIENICKE PREDPISY MINISTERSTVA ZDRAVOTNICTVI CSR (HYGIENIC REGULATIONS OF MINISTRY OF HEALTH OF CSR)
					<u>Last Amendment</u> : <u>Entry / Update</u> : DEC1991

## Substance

Chemical Name :  
 Reported Name : **1-OCTADECANOL**  
 CAS Number : **112-92-5**

Area Type Subject Spec. Description Level / Summary Information :

DEU	REC	AQ USE	- INDST	CLASS RQR	SATURATED FATTY ALCOHOLS WITH AN EVEN- NUMBERED C CHAIN, C NUMBER >= 12, AND A TERMINAL OH GROUP ARE CLASSIFIED AS IN GENERAL NOT HAZARDOUS TO WATER (WATER-HAZARD CLASS: WGK 0). (THE DIFFERENT CLASSES ARE: WGK 3 = VERY HAZARDOUS; WGK 2 = HAZARDOUS; WGK 1 = SLIGHTLY HAZARDOUS; WGK 0 = IN GENERAL NOT HAZARDOUS.) THE CLASSIFICATION FORMS THE BASIS FOR WATER-PROTECTION REQUIREMENTS FOR INDUSTRIAL PLANTS IN WHICH WATER-HAZARDOUS SUBSTANCES ARE HANDLED.
					<u>Title</u> : ADMINISTRATIVE RULES CONCERNING WATER- HAZARDOUS SUBSTANCES (VERWALTUNGSVORSCHRIFT WASSERGEFAEHRDENDE STOFFE)
					<u>Reference</u> : GMSMA6, 8, 114, 1990 <u>Effective Date</u> :
					Gemeinsames Ministerialblatt. Joint Ministerial Papers
					<u>Last Amendment</u> : <u>Entry / Update</u> : DEC1991

## Substance

Chemical Name :  
 Reported Name : **stearyl alcohol**  
 CAS Number : **112-92-5**

Area Type Subject Spec. Description Level / Summary Information :

GBR	REG	TRNSP AQ AQ	MARIN MARIN EMI	RQR RQR RQR	CLASSIFIED AS A NON-POLLUTING LIQUID SUBSTANCE. DOCUMENTARY EVIDENCE OF ASSESSMENT AND APPROVAL REQUIRED BY A CARRIER. DISCHARGE INTO THE SEA IS NOT PROHIBITED.
					<u>Title</u> : THE MERCHANT SHIPPING (CONTROL OF POLLUTION BY NOXIOUS LIQUID SUBSTANCES IN BULK) REGULATIONS 1987, SCHEDULE 2
					<u>Reference</u> : GBR SI*, 551, 15, 1987 <u>Effective Date</u> : 06APR1987
					STATUTORY INSTRUMENTS
					<u>Last Amendment</u> : GBR SI*, 2604, 2, 1990 <u>Entry / Update</u> : 1992
					STATUTORY INSTRUMENTS

## Substance

Chemical Name :  
 Reported Name : **stearyl alcohol**  
 CAS Number : **112-92-5**

Area Type Subject Spec. Description Level / Summary Information :

USA	REG	FOOD PACK MANUF USE	ADDIT ADDIT ADDIT	RSTR RSTR GL RSTR	<p>; SUMMARY - THIS SUBSTANCE INCLUDED ON A LIST OF SUBSTANCES USED TO PREPARE BASE SHEET OR COATING SUBSTANCES FOR CELLOPHANE MUST BE OF A GRADE OF PURITY SUITABLE FOR USE IN FOOD PACKAGING TO IMPART THE DESIRED TECHNOLOGICAL PROPERTIES. ACRYLONITRILE COPOLYMER SUBSTANCES MUST ABIDE UNDER THE CONDITIONS GIVEN IN 21 CFR 180.22 1988.</p> <p><b>Title</b> : INDIRECT FOOD ADDITIVES; POLYMERS-CELLOPHANE.</p> <p><b>Reference</b> : FEREAC, 42, 14572, 1977 <b>Effective Date</b> : 1977 Federal Register</p> <p><b>Last Amendment</b> : CFRUS*, 21, 177, 1200, 1988 <b>Entry / Update</b> : NOV1991 Code of Federal Regulations</p>
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## Substance

Chemical Name :  
 Reported Name : **1-OCTADECANOL**  
 CAS Number : **112-92-5**

Area Type Subject Spec. Description Level / Summary Information :

EEC	REG	FOOD FOOD FOOD	-	RQR MXL RSTR	<p>THE SUBSTANCE MAY BE USED FOR THE MANUFACTURE OF REGENERATED CELLULOSE FILM WHICH IS INTENDED TO OR DOES COME INTO CONTACT WITH FOODSTUFFS. THE MAXIMUM QUANTITY OF THE SUM OF 1-HEXADECANOL AND 1-OCTADECANOL: 2MG/DM2 ON THE SIDE IN CONTACT WITH FOODSTUFFS.</p> <p><b>Title</b> : COUNCIL DIRECTIVE OF 25 APRIL 1983 ON THE APPROXIMATION OF THE LAWS OF THE MEMBER STATES RELATING TO MATERIALS AND ARTICLES MADE OF REGENERATED CELLULOSE FILM INTENDED TO COME INTO CONTACT WITH FOODSTUFFS. (83/229/EEC).</p> <p><b>Reference</b> : OJEC**, L123, 31, 1983 <b>Effective Date</b> : 01APR1987 Official Journal of the European Communities</p> <p><b>Last Amendment</b> : OJEC**, L228, 32, 1986 <b>Entry / Update</b> : OCT1987 Official Journal of the European Communities</p>
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